accuracy. If you need a distance larger than your hand can supply, a twig broken into a one foot length and held at arm's length appears about 30 degrees long.

The maps on the following pages contain many references to angular distances in degrees between one object, or star group, and another. Memorizing the approximate degree values for various finger and hand configurations at arm's length will give you a portable "sky ruler."

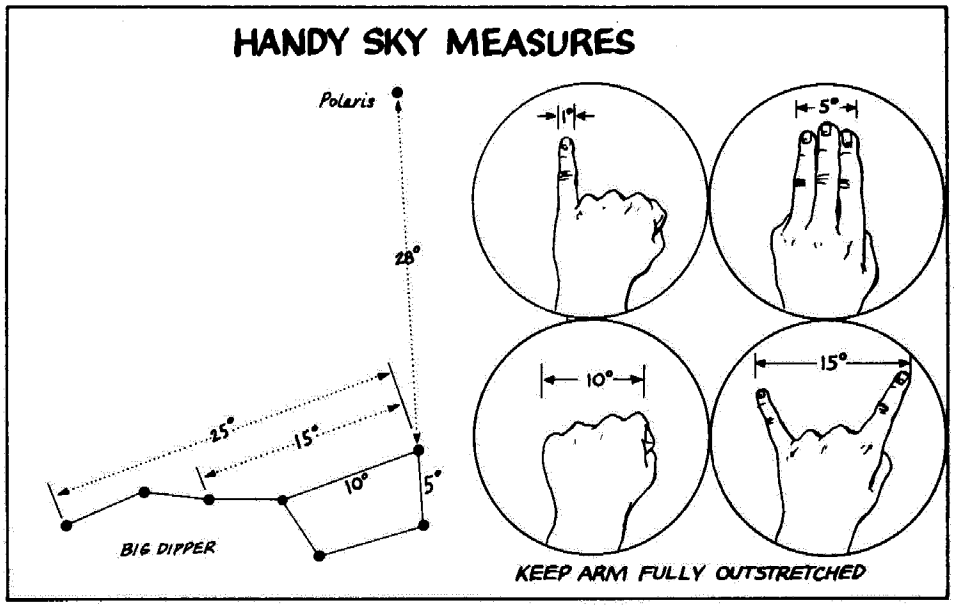
On a smaller scale, the sun and the moon are only one half degree in apparent diameter although they seem larger because of their brightness. Yet either can be easily covered by the tip of your little finger held at arm's length. Angular measures in the sky of less than one degree are stated in minutes of arc and measurements less than one minute are given in seconds of arc. The abbreviations used for degrees, minutes and seconds are ° , ' ,".

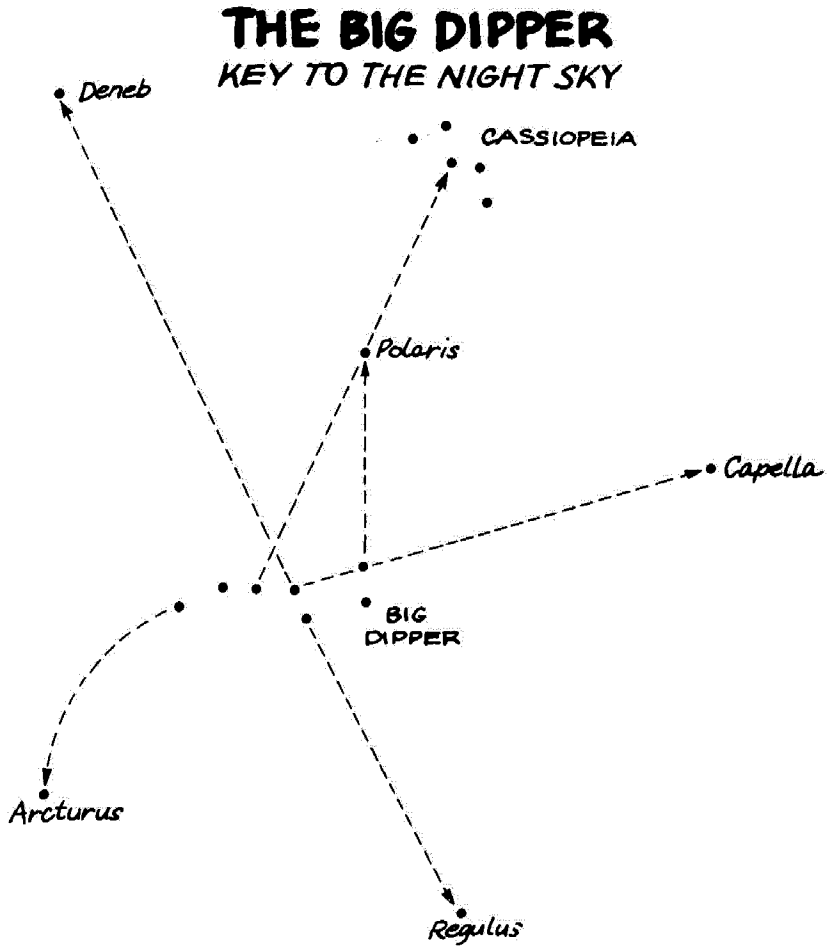
(These divisions should not be confused with hours, minutes and seconds of right ascension which we will encounter later.)

We will discuss this subject in detail later, but for now angular measure in degrees is all you need to know to find the major guideposts of the sky.

Identifying Constellations

Like the land areas of the Earth, the night sky has been divided by mankind into political sectors, partitioned from one another by artificial boundaries. Of course, no one claims ownership of any piece of the sky, but we have inherited a sky lore that grouped various stars under designations like Orion, Gemini and Taurus for reasons that were somewhat political in their time. Characters from Greek and Roman mythology found their way into the sky along with intriguing legends. The whole sky is intertwined with animals, heroes and villains that provide a romantic flavor of a long-gone era. (The saga of who and what got the





By some cosmic coincidence the Big Dipper stars are arranged so that they conveniently point at most of the major bright stars in the sky. This diagram can be used at any time of any night of the year because the stars do not change their positions relative to one another. What does change is the direction that you face into space due to Earth's rotation and revolution. This means that although the Dipper itself will always be visible (if you live north of 38° north latitude) not all of the stars that are indicated in this diagram will be above the horizon at any one time. Once you have identified some of the major guide stars you can then turn to the appropriate connecting map on the following pages to continue your sky exploring.